Monitoring - Session # 3

- Target Existing PAMS/NAMS/SLAMS Sites
- Consider Adjustment for PM-10 to PM-2.5
- Collocate FP Monitors with Meteorological Monitors
- Should Be Increased Emphasis on Background/Transport Monitoring

Monitoring - Session # 3

- Use Survey Techniques to Plan Monitoring Networks (e.g. Saturation Studies)

- Criteria for Planning and Site FP Samplers

  - Visual Observations
  - Terrain Considerations
  - Population Density
  - Pre-Plan Pollution Prevention to Alleviate Existing Problems, Prior to Designation
  - Existing PAMS Sites
  - Collocate with High Ozone Sites
  - Collocate with High(est) PM-10 Sites

Monitoring - Session # 3

- Consider Multiple Networks
  - Concentration-Based Targets (1st)
  - Risk-Exposure-Based Targets (2nd)
  - Combined Goal Targets (3rd)

- Define and Prioritize Monitoring Objectives
  - High Population Density
  - Characterize Problem
  - Address Control Problem
  - Consider Persistence in Prioritization
  - De-emphasize Microscale Problems; e.g. use a screening procedure to focus network

Monitoring - Session # 3

- Local Conditions are Important for Initial Network Designs
- Some Federal Guidance and Flexibility Is Required to Address Most Serious Local Effects
- Should Monitor Network Deployment Guidance Be Included in Part 58 Document?

Monitoring - Session # 3

- PM-10 versus PM-2.5
  - If PM-10 < PM-2.5 Standard, Maintain the Existing PM-10 Monitoring and Allow Some Reasonable Adjustment Before Requiring Replacement with a PM-2.5 Monitor
  - Consider Physical Differences (e.g. source mix) in PM-10 and PM-2.5

Monitoring - Session # 3

- Major Uncertainty is the Physical Nature of Fine Particulates

- Use Limited Data and Modeling Results to Target Initial Locations and to Address Regional Effects
  - Target Areas Without Existing PM-10 Sites
  - Focus on High Ozone Sites; however, this might neglect important exposure considerations
  - Consider Collocating with CASTnet
  - Consider Effects of Ammonia Emissions
  - Consider and Learn About the Role of Primary FP
  - Consider High CO Sites for Urban Areas

Monitoring - Session # 3

- EPA Allows Rather Than Requires A Preliminary Screening Study By States

- States Use Results As Feedback to Improve Screening and Adjust Monitoring Design to Achieve Objectives. Allow for a Feedback Cycle as Understanding Improves

Monitoring - Session # 3

- Conduct an EPA Study with Screening Samples to Reduce Uncertainty About Needs Surrounding the FP Monitoring Network
  - EPA is Currently Locating Available FP Data on Screening Studies
  - Additional Data is Definitely Needed
- Keep Guidance Generic and Allow Individual States to Develop Their Initial Programs

Monitoring - Session # 3

- What Fundamental Guidance Should the Design Be Based Upon?
  - First - Populations with expected high concentrations
  - Likely source regions
  - Mechanism for EPA screening when States fail to adequately address issues
  - Setting minimum requirements could prohibit certain States from doing more (for States that must assume the minimum requirements wherever they exist in regulations)

Monitoring - Session # 3

- Develop Generic EPA Guidance

- States Develop Specifics, Including:
  - Prioritize Objectives
  - Monitoring Siting Criteria
  - Number of Monitors; Types of Monitors (e.g. background, source, exposure, etc.)
  - Timing; Schedules

- Should Generic Guidance Include High Population, High Concentration Site As a Mandatory Need?
  - Could consider city size
  - Guidance should discuss background concentrations; IMPROVE data and model results

Monitoring - Session # 3

- Specify Minimum Requirements for Federal Objectives and Leave Guidance Without Minimum Requirements for State Program
- Consider Approaches to Allow EPA to Supplement Monitoring in States That Fail to Meet Guidelines or Minimum Requirements
- Is It Important for EPA to Oversee Networks to Ensure Consistency and Adequacy?
- If All Areas with Problems Could Be Predicted, Monitoring Should Be Done in All of Them Eventually

Monitoring - Session # 3

- Siting Network Guidelines Could Change For FP Relative to PM-10. Problem of Microscale Bias; In local areas, microscale could have health exposure affects and Environmental Justice issues
- Haze is Solely Regional in Scope; Local Effects Are Not Important
- Could Start with IMPROVE Network Experience to Address Regional FP Issues
- Form of Guidance or Regulation Given That Regional FP Is a National and State Problem; e.g. when IMPROVE and CASTnet do not meet needs

Monitoring - Session # 3

- Operation and Maintenance Costs of an EPA-Managed Regional FP or Haze Network
  - Minimum Network to Adequately Apportion Sources
  - Serve Dual Purpose to Track Regional FP and to Identify Sources
- Justifiable Minimum Requirements Likely in Face of Unfunded Mandates and Requirements. Needs have to Support Intended Objectives

Monitoring - Session # 3 (Summary)

- Target High Population and High Concentration Areas
- Extend Ratio Research/Understanding
- Background Influence
- Neighborhood Microscale Influence
- Two Types of Networks
  - Problem Identification
  - Problem Control
- Supplement Existing PM-10 Based Screening
- Phase In Approaches for Different Objectives